

U.S. Patent No. 8,217,887		
1[Pre]. A control circuit for an electronic display comprising:	13[Pre]. A method for controlling an electronic display comprising:	17[Pre]. A liquid crystal display comprising:
1[a]. a first circuitry for controlling luminosity levels of a plurality of strings of light emitting diodes (LEDs);	13[ci]. using the clock signal for adjusting luminosity levels of a plurality of strings of light emitting diodes (LEDs) in a backlighting circuitry of the electronic display,	17[a]. a plurality of strings of light emitting diodes (LEDs) including a string of red LEDs, a string of green LEDs and a string of blue LEDs; 17[b]. a first circuitry for controlling luminosity levels of the plurality of strings of LEDs;
1[b]. a second circuitry for controlling a plurality of pixels for displaying a plurality of image frames of a video;		17[c]. a plurality of pixels for displaying a plurality of image frames of a video; 17[d]. a second circuitry for controlling the plurality of pixels;
1[ci]. the second circuitry for displaying each image frame of the plurality of image frames for a predetermined period of time,		17[ei]. the second circuitry for displaying each image frame of the plurality of image frames for a predetermined period of time determined by a frequency of a VSYNC signal having a first frequency,
1[cii]. the second circuitry configured to change a displayed image frame once every cycle of a first clock signal having a first frequency; and	13[b]. changing a displayed image frame on the electronic display once every cycle of the reference signal; and	17[eii]. the second circuitry configured to change a displayed image frame once every cycle of the VSYNC signal; and
1[di]. the first circuitry for adjusting the luminosity levels of the plurality of strings of LEDs for a plurality of times within the predetermined period of time,	13[cii]. wherein luminosity levels of at least one of the plurality of strings of LEDs are adjusted a plurality of times based on the clock signal during display	17[fi]. the first circuitry for adjusting the luminosity levels of the plurality of strings of LEDs for a plurality of times within the predetermined period of time,

	of one image frame in a sequence of image frames	
1[dii]. the first circuitry configured to adjust the luminosity levels according to a second clock signal having a second frequency that is a multiple of the first frequency and is higher than the first frequency.	13[a]. generating a clock signal having a frequency that is a multiple of a reference frequency by multiplying a reference signal having the reference frequency, the frequency being higher than the reference frequency;	17[fii]. the first circuitry configured to adjust the luminosity levels according to a second clock signal having a second frequency that is a multiple of the first frequency and is higher than the first frequency.
2. The control circuit of claim 1, wherein the predetermined period of time includes approximately 1/30 seconds.		18. The display of claim 17, wherein the predetermined period of time includes approximately 1/30 seconds.
3. The control circuit of claim 1, wherein the plurality of times includes a number selected from a set of one, two, three, four, five, six, seven, eight, nine and ten.		19. The display of claim 17, wherein the plurality of times includes a number selected from a set of one, two, three, four, five, six, seven, eight, nine and ten.
4. The control circuit of claim 1, wherein the first clock signal is a VSYNC signal, and the predetermined period of time is a period of time between two successive rising edges of pulses of the VSYNC signal.		
5. The control circuit of claim 1, wherein the first clock signal is a VSYNC signal, and the first circuitry configured to adjust the luminosity		

levels of the plurality of LED strings for a plurality of times between an occurrence of two successive pulses of a VSYNC signal.		
6. The control circuit of claim 1, wherein the plurality of strings of LEDs include a string of red LEDs, a string of blue LEDs and a string of green LEDs.		
7. The control circuit of claim 1, the display further comprising: a first display section associated with a first set of pixels of the plurality of pixels; a second display section associated with a second set of pixels of the plurality of pixels; a first set of strings of the plurality of strings associated with the first section; a second set of strings of the plurality of strings associated with the second section; the first circuitry configured to adjust luminosity levels of the first set of strings according to a portion of an image frame being displayed by the first set of pixels and to adjust luminosity levels of the second set of strings according to a portion of the image frame being displayed by the second set of pixels.		
8. The control circuit of claim 1, further comprising: an ambient light sensor coupled to the first circuitry; and the first circuitry configured for		

adjusting the luminosity levels of the plurality of strings of LEDs based on ambient lighting conditions.		
9. The control circuit of claim 8, wherein the first circuitry is configured to adjust a luminosity level of a red string of LEDs to a different luminosity level from a luminosity level of a green string of LEDs.		21. The display of claim 17, wherein the first circuitry for adjusting a luminosity level of the string of red LEDs to a different luminosity level from a luminosity level of the string of blue LEDs based upon an ambient light condition.
10. The control circuit of claim 1, wherein the display includes a liquid crystal display.		
11. The control circuit of claim 1, further comprising: the first circuitry for causing the luminosity levels of the plurality of strings of LEDs to become zero during a raster blanking interval.		
12. The control circuit of claim 1, wherein the plurality of strings of LEDs include a combination of a string of white LEDs and one or more strings of LEDs selected from the group consisting of a string of red LEDs, a string of blue LEDs, or a string of green LEDs.		
	14. The method of claim 13, wherein the reference frequency includes a frequency of a VSYNC signal.	

	15. The method of claim 13, wherein adjusting the luminosity levels of a string of LEDs includes adjusting the luminosity levels at the frequency of the clock signal.	
	16. The method of claim 15, wherein adjusting the luminosity levels of the string of LEDs is based on a color of the LEDs and an ambient light condition.	
		20. The display of claim 17, wherein the first circuitry is configured to generate the second clock signal.